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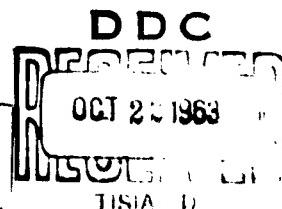
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- (6) Mechanised Rifle Troop,  
(M113) (U).  
(7) MONTHLY TEST REPORT, NUMBER 5,

1-30 June 1963.

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ARMY CONCEPT TEAM IN VIETNAM  
APO 143, San Francisco, California

ACTIV-GM

13 August 1963

SUBJECT: Monthly Test Report Number 5 -- Mechanized Rifle Troop (M113)  
(1 - 30 June 1963) (U)

TO: See Distribution

1. (C) General

Missions performed by mechanized rifle troops during the reporting period were static in nature and consisted primarily of route and area security. Therefore this report contains only a discussion of logistical problems encountered (Incl 1) and projected study items (Incl 2).

A description of the test units, discussion of test objectives and operational plan of test are contained in previous monthly test reports.

Previous estimates of 95 percent test completion remain unchanged.

2. (C) References

a. DA letter, AGAM-P(M) 381 (31 Oct 62) DCSOPS, subject: "Army Troop Test Program in Vietnam (U)," 6 November 1962, as amended.

b. ACTIV letter (to CGUSACDC), subject: "Plan of Test, Mechanized Rifle Troop (M113) (U)," 28 November 1962.

c. ACTIV letter (to CINCPAC through COMUSMACV), subject: "Summary of Test Plan for Mechanized Rifle Troop (M113) (U)," 3 December 1962.

d. CINCPAC message, subject: "Proposal for US Army Tests in Vietnam", DTG 220216Z (January 1963).

e. Monthly Test Reports Numbers 1 through 4 - Mechanized Rifle Troop (M113), Army Concept Team in Vietnam.

2 Inclosures  
as

THOMAS O. BLAKENEY  
Colonel, Armor  
Chief

*Thomas O. Blakney*

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## LOGISTICAL SUPPORT REQUIREMENTS

### 1. (C) General

This discussion addresses itself to Objective Number 3 of the test plan which is "To determine the logistical support requirements for units and individual vehicles when operated in a counterinsurgency role in the Republic of Vietnam."

### 2. (C) Discussion

#### a. Maintenance

(1) First echelon maintenance continues to be outstanding in all units. Second and third echelon maintenance have been performed effectively. Due to the relatively small number of combat operations, units have had an opportunity to check and maintain their vehicles thoroughly during this period.

(2) Major assembly failures continue to be low. A spot inspection of 15 vehicles with a 5000 mile average indicates that an engine rebuild program may be needed in the near future. The necessary repair parts for such a program have been ordered. It is hoped that these engines can be rebuilt on an "as needed" basis and replaced in vehicles by float engines. This would keep the fleet entirely operational while the engine rebuild is being conducted. Only the vehicles in the Mekong Delta region (IV Corps) fall into this high mileage category. Vehicles in the other corps areas evidence considerably less mileage.

(3) The following major maintenance problems were noted during the period:

(a) Ignition Coils - FSN 2920-324-0371. This coil has been failing in large numbers and is currently in an "out-of-stock" position. As a field expedient, M-24 tank coils and 3/4-ton truck coils are being substituted satisfactorily. These items do not fit the same distributor case as the prescribed coil, and are wired to the engine and through the distributor for satisfactory operation.

(b) Rectifier - FSN 6130-314-0545. This component has been failing on vehicles with high mileage (approximately 5500 miles). The cause of failure is unknown. Five vehicles are presently deadlined for lack of this component.

(4) One ARVN Mechanized Rifle Troop wants to perform the scheduled 2nd echelon engine maintenance (Q-Check) according to hours of engine operation rather than quarterly or mileage. This desire stems from experience during many of the operations when up to 90 percent of the engine running time is spent at the idle. The Army Tank-Automotive Center, Detroit, has been contacted in this regard.

#### b. Supply

(1) Supply of repair parts continues to be on a "hand-to-mouth" basis. Requisitions for all critical items have been placed with the Logistical Center, Japan, and positive action has been taken to build adequate stocks in consonance with forecast usage rates. The following parts are in critical stock position:

- (a) Starter - FSN 2920-704-1708
- (b) Shock Absorber - FSN 2540-714-6156
- (c) Ignition Coil - FSN 2920-324-0371
- (d) Regulator - FSN 2920-540-9476

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- (e) Switch, fuel, interlock - FSN 5930-771-6119
- (f) Switch, engine, start - FSN 2920-714-6128
- (g) Belt, generator, drive - FSN 3030-676-8945
- (h) Radiator - FSN 2930-679-9748
- (i) Hose - FSN 4720-679-9771
- (j) Rectifier - FSN 6130-314-0545

(2) Replacement track has arrived in sufficient quantity to overcome the problem reported in previous ACTIV reports.

## 3. (C) Findings

- a. First echelon maintenance is outstanding.
- b. The current lull in operations has allowed the units to perform thorough maintenance checks.
- c. An engine rebuild program will be initiated in the near future.
- d. Ignition coils and rectifiers constitute the most significant maintenance problems during the reporting period.
- e. ARVN desires to perform quarterly engine and maintenance checks according to hours of operation.
- f. Supply continues to be in a critical position.

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## PROJECTED STUDY ITEMS

The following items are projected for study and inclusion in future reports pertaining to the Armored Personnel Carrier, M113.

### 1. (C) Capstans and Ground Anchors

The capstans shown in Annex E, "Monthly Test Report Number 2 - Mechanized Rifle Troop (M113)" have arrived in the Republic of Vietnam for testing. These capstans will be used as a self recovery device to assist in canal crossings. Auger type ground anchors will be used with the capstans when natural anchors such as trees are not available. (See figure 1.) Nylon rope will be used to provide the tensile strength required and save weight.

### 2. (C) .30 Caliber Machine Gun Cupolas

Four enclosed caliber .30 machine gun cupolas have been mounted on the M113 for test in the RVN (See figures 2 through 5). This cupola will afford added protection for the gunner. Although this cupola "dowm-guns" the M113, many in Vietnam feel that this weapon will be superior to the caliber .50 machine gun for the short periods of enemy contact common to counter-insurgency war.

This cupola is a modified version of that found on the Navy LVTP-5. It has been enthusiastically received in Vietnam because it affords a very stable firing platform with a simple mechanical design. The functional worth of this device will be discussed in future reports.

### 3. (U) Push Bars

An A-frame type "push bar" has been locally fabricated for test. (See figure 6.) The "pushing" method of crossing small, shallow, steep banked canals has proved to be one of the most successful methods. The results of this testing will be discussed in future reports.

### 4. (C) .30 Caliber Machine Gun Mount

Caliber .30 machine gun mount - A request for a channeled adapter to mount a caliber .30 machine gun on the left or right side of the cargo hatch has been forwarded to the Combat Developments Command. This will allow maximum ambush protection and provide a capability of saturating insurgent positions with fire during contact. (See figure 7.)

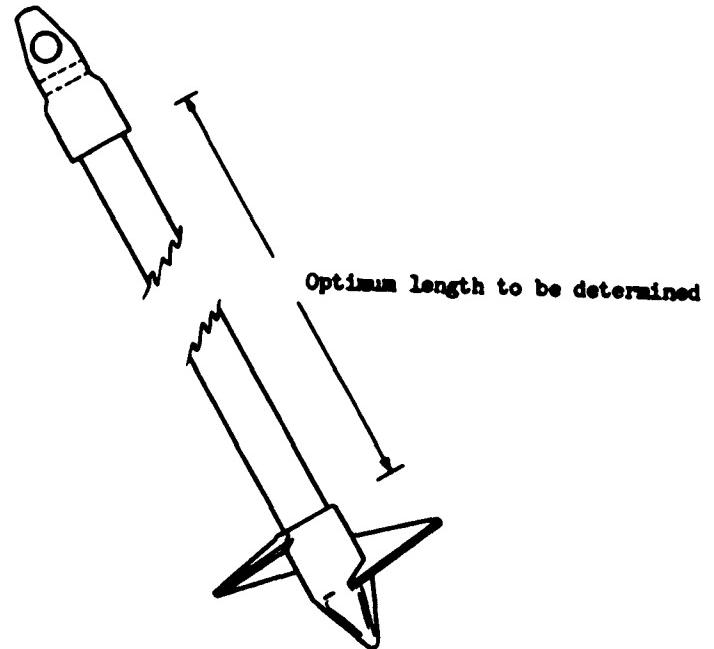
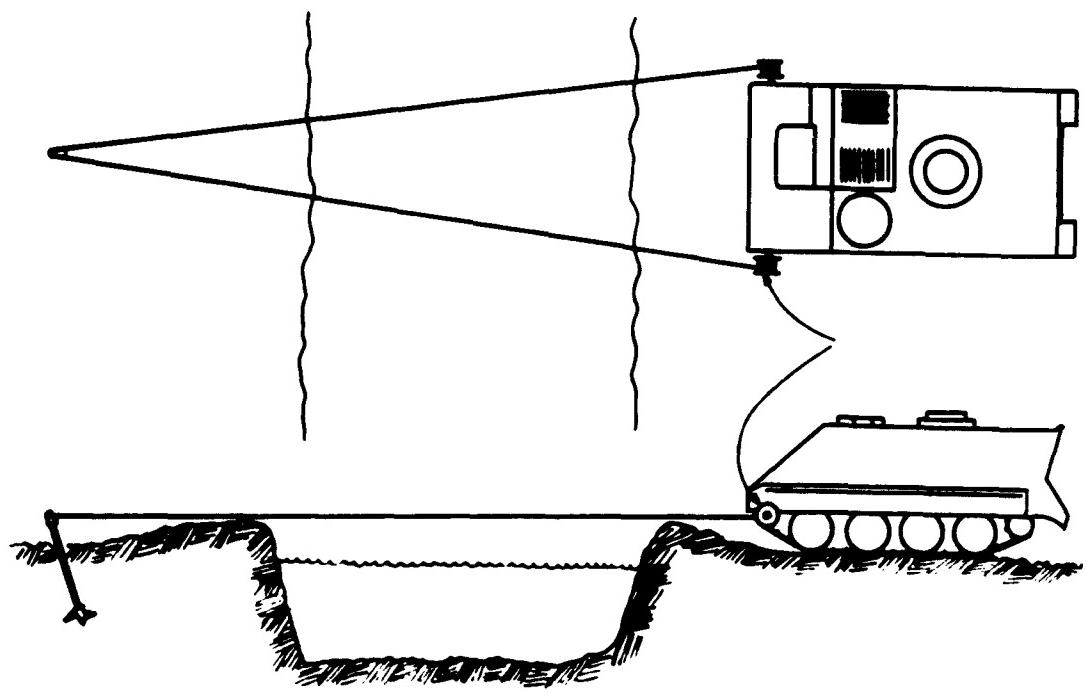


FIGURE 1  
AUGER-TYPE GROUND ANCHOR

For Use With Capstan in M113 Self-Recovery Operations



FIGURE 2  
MODIFIED NAVY LVTP-5 CUPOLA MOUNTED ON  
M113 (FRONT VIEW)



FIGURE 3  
MODIFIED NAVY LVTP-5 CUPOLA MOUNTED ON  
M113 (SIDE-VIEW)

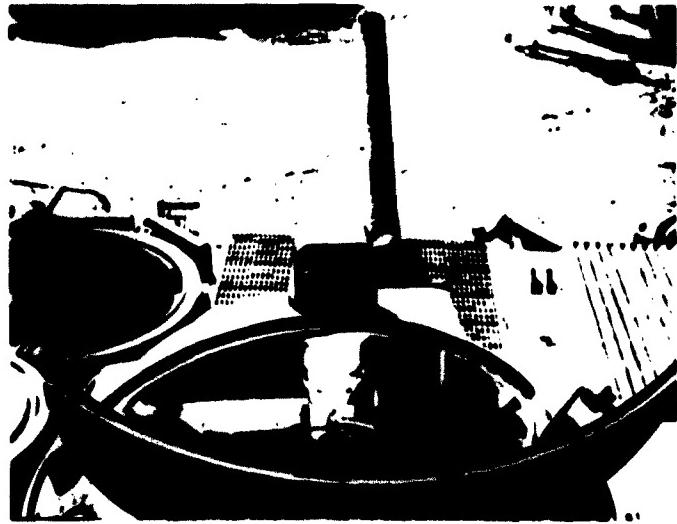


FIGURE 4  
MODIFIED NAVY LVTP-5 CUPOLA MOUNTED ON  
M113 (TOP-VIEW)

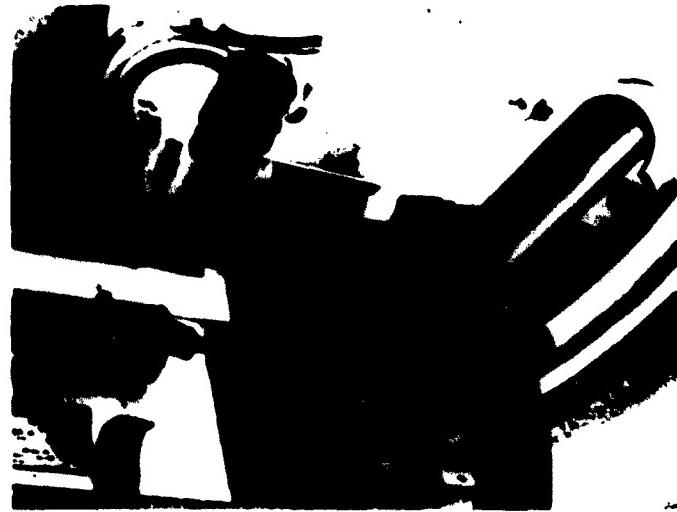


FIGURE 5  
MODIFIED NAVY LVTP-5 CUPOLA MOUNTED ON  
M113 (INSIDE VIEW SHOWING MONOCULAR  
SIGHT AND .30 CALIBER .30 MACHINE GUN)



FIGURE 6  
LOCALLY FABRICATED A-FRAME "PUSH BAR"

This device mounts on towing pintles on the front of the M113. Height of adjustment is controlled by chains fastened to lifting eyes. Contact shoe is connected to the A-frame by semi-articulating linkage which allows maximum shoe surface contact.

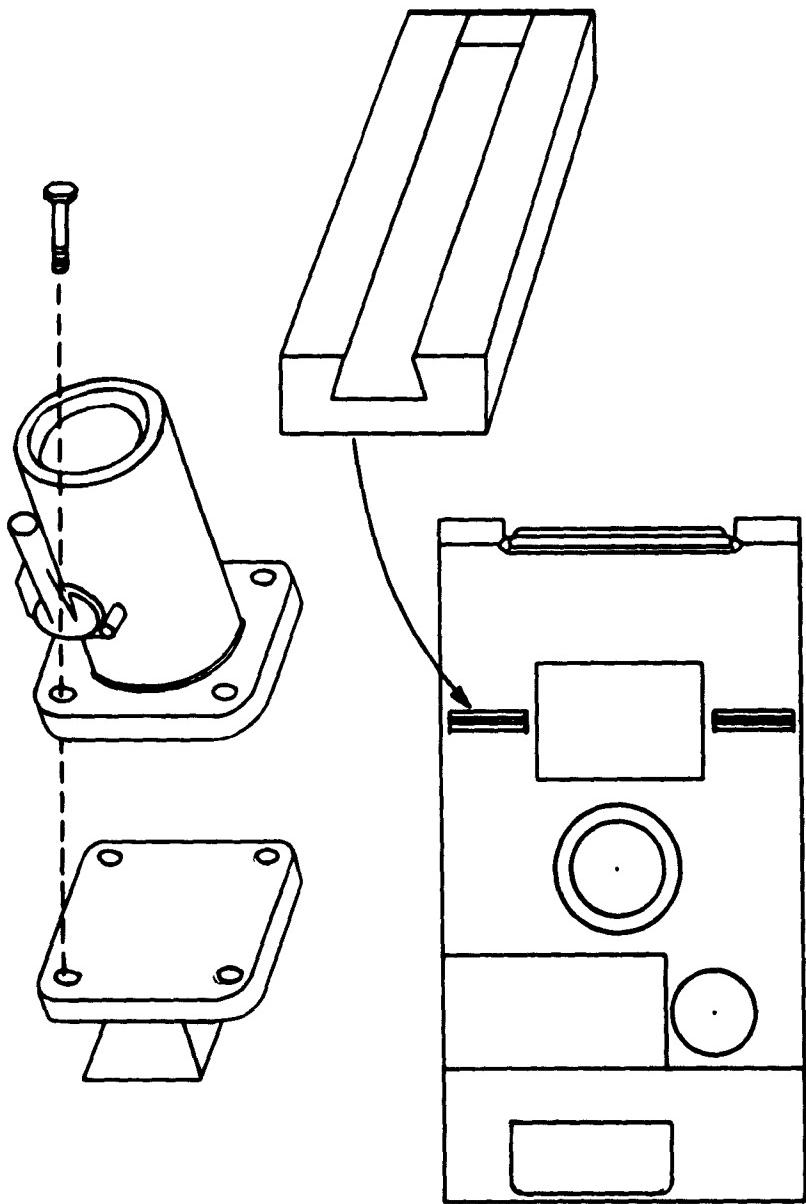


Figure 7

CHANNELED ADAPTOR FOR MOUNTING CALIBER .30 MACHINE GUN ON SIDE OF M113 CARGO HATCH

Incl 2